surgical procedures, but also the administration of medicines to control lipids, blood pressure, antidepressants and even hypoglycemia, and even then those expenditures does not consider the indirect expenses such as transportation and escort the patient to the hospital and absence from work.

PCV63

ESTIMATING THE COSTS OF CARDIAC REHABILITATION PROGRAMS IN HEART FAILURE (HF) IN COLOMBIA: CONSTRUCTION BASED ON EXPERT CONSENSUS

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OBJECTIVES: To determine the components and the costs of an exercised-based rehabilitation program for patients with chronic systolic HF, from the point of view of the provider of the service. **METHODS:** Systematic review of the literature and expert consensus. Identification of components of HF rehabilitation programs, based on the literature, and Delphi rounds of experts for consensus. Only variable costs associated with the components of the program were estimated, based on the Colombian 256 agreement of 2001 (the Colombian norm that set the tariff for reimbursement for health care services) plus 23%, 30%, or 48%, to approximate the range of costs in current (2012) health care package negotiations in Colombia between providers and payers. For 2012, US$1=COL$1,783. **RESULTS:** Based on expert consensus of cardiologists and physical therapists, 18 components of the rehabilitation program were identified. After the second round, over 80% agreement was obtained for the remaining three components, and an additional component was identified. After the third round, consensus was obtained for a program of 36 rehabilitation sessions and 19 components. With the base-case scenario of agreement 256 plus 30%, the cost per session of the program was inversely proportional to the number of patients in each session: COL $96,903 for one patient, and COL $11,623 for 15 patients. For a program with 10 patients per session, the costs of a program may range from COL$ 471,130 to COL $656,554, depending on the agreement type. **CONCLUSIONS:** Agreement is critical to unify criteria on the components of a rehabilitation program that is both effective and safe for patients with HF. From the point of view of the provider, variable costs associated with implementation are sensitive to the number of patients per session. This study should set the basis for the estimation of the cost-effectiveness of rehabilitation programs in heart failure.

PCV64

ECONOMIC EVALUATION OF INFLUENZA VACCINATION IN PREVENTING HOSPITALIZATION IN CARDIOVASCULAR DISEASE PATIENTS

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OBJECTIVES: Although the Advisory Committee for Immunization Practices (ACIP) and other organizations recommend annual influenza vaccination for cardiovascular disease patients (CVD), the vaccination rate is low in this risk group. Economic assessment of vaccination will aid public officials plan campaigns to increase coverage. **METHODS**: We estimated using a Monte Carlo (probabilistic) spreadsheet-based decision tree, the cost-effectiveness of vaccination to prevent hospitalization and death in all 27.1 million CVD patients in the US. We then estimated the benefit-cost ratios (BCR) associated with hospitalization and death averted by increasing coverage rates by 10% in all adult CVD patients from the current rates of 45% and 65% (for ages <65 years and ≥65 years, respectively). Finally, we estimated the BCR associated with reaching the healthy people 2020 goal of vaccinating 90% of person's ≥65 years and 80% of adults' <65 years. We obtained treatment cost data from Marketscan database (2005-2010) and epidemiological data from the literature. We performed the analysis from the health care perspective including only cost associated with hospitalization and vaccination and reporting median cost values. **RESULTS**: Vaccination of all 27.1 million CVD patients' would result in the following: 20,738 (S.D 48,387)) quality-adjusted life years (QALY) saved, $10,107 (95% CI: cost-savings (CS) to $70,554) / QALY saved, $31,563 (CI: CS to $151,900)/ hospitalization averted, and $76,588 (CI: CS to $534,658)/ premature death averted. The base case BCR is 0.52. A 10% increase in vaccination rate costing $41.2million (S.D $7.2 million) would result in hospitalization-related savings of $28 million (S.D. $165 million) (BCR=0.68). Achieving healthy 2020 goal would cost $257 million (S.D. $45 million) and result in $ 216 million (S.D. $1.4 billion) hospitalization savings (BCR=0.84). **CONCLUSIONS:** Increasing vaccination coverage rate among CVD patients will avert hospitalization and most likely deaths, but with variability in economic impact.

PCV65

QUANTITATIVE RISK-BENEFIT ANALYSIS OF ORAL PHOSPHODIESTERASE TYPE 5 INHIBITORS ON ERECTILE DYSFUNCTION TREATMENT

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OBJECTIVES: Erectile dysfunction is a common male sexual disorder worldwide. Three oral medications – sildenafil, vardenafil, and tadalafil – have been used to treat erectile dysfunction. This study aimed to conjointly evaluate the therapeutic risks and benefits of the three medications to assist decision making of prescribing from the perspective of both physicians and patients. **METHODS:** A decision model was created to compare the risk-benefit of the aforementioned medications. Using published meta-analysis data, we performed a probabilistic Monte Carlo simulation to estimate the joint distribution of each type of adverse event (i.e., risk; categories included: any adverse event, serious cardiovascular (CV) events, headache, flushing, and dyspepsia) and effectiveness (defined as proportion of patients with improved erections). The incremental risk-benefit ratios (ICBRs) were calculated, and the results were illustrated by incremental risk–benefit planes. To account for differential risk preferences across patients, the results were also illustrated using risk–benefit acceptability curves and net-benefit curves. **RESULTS:** When risk was defined as having any adverse event, serious CV event, or headache, sildenafil was dominated by vardenafil (ICBR= -1.00, -0.20, and -3.20, respectively); tadalafil showed increasing risk and benefit as compared to vardenafil (ICBR=0.83, 0.03, and 0.13, respectively). Tadalafil dominated sildenafil and vardenafil when balancing between the risk of flushing/dyspepsia and the drug efficacy. **CONCLUSIONS:** Based on patients' concern of various categories of adverse events and assuming negligible concern over medical costs, vardenafil or tadalafil may be preferred over sildenafil.

PCV66

ESTIMATING COSTS SAVINGS FROM A CME ACTIVITY TO PREVENT BLEEDING-RELATED COMPLICATIONS AND TRANSFUSION

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OBJECTIVES: In 2011, investments in continuing medical education (CME) exceeded $2 billion. Few studies report the economic impact of CME activities. Greater understanding of the economic value of CME assists stakeholders and health care cost payers in resource allocation. It is not feasible to obtain patient-level data after each CME activity. We developed a model to estimate the potential health care cost savings associated with CME activity outcomes. **METHODS:** We evaluated data from a certified CME symposium for surgeons that reviewed the Society for Thoracic Surgeons (STS) blood conservation guidelines. The activity promoted prevention of bleeding-related complications (BRCs). We estimated the potential savings of averted BRCs from the provider perspective predicted by participants' self-reported commitment to change (CTC). Model parameter estimates were from: 1) costs of BRCs in 103,826 cardiac operations; 2) costs of reoperation for bleeding in 133,001 coronary artery bypass graft surgeries; 3) operative volume from the STS workforce report. The base case was 3 in 10 participants preventing one BRC in 2% of operations over 1 year. Probabilistic sensitivity analysis (PSA) using second-order Monte Carlo simulations was used to model parameter uncertainty. Results were standardized to 2012 $US using the medical care component of the Consumer Price Index. **RESULTS:** 93.8% of participants (n=133) reported CTC, a validated measure of behavior change. For BRCs, the savings for the base case was $1,500,112. PSA estimated the mean savings as $1,502,769 (95% CI, $869,860–$2,359,068). For reoperation for bleeding, the savings for the base case was $2,974,497. PSA estimated the mean savings as $2,959,117 (95% CI, $1,135,992–$5,566,487). **CONCLUSIONS:** Plausible economic estimates suggest that CME-related learning favorably impacting clinical practice yields substantial cost savings. Model prediction of averted costs associated with CME allows estimation of the economic impact on surgical outcomes in the absence of patient-level outcomes data related to CME activities.

PCV67

EVALUATION OF ECONOMIC AND MEDICAL CONSEQUENCES OF THE ROTARY LEFT VENTRICULAR ASSIST DEVICE WITH A DISCHARGE AT HOME IN FRANCE

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OBJECTIVES: Advanced heart failure (HF) is a leading cause of death in developed countries with a one-year mortality rate estimated at 40% after the first hospitalization. In France, HF affects 150 000 persons with annual costs of up to 1,6 billon euros. Cardiac transplantation is the most effective treatment. However, because of a limited donor organ supply, innovative technics as left ventricular assist devices (LVAD) are developed as bridge to transplantation for over 10 years. The aim of this study is to assess the medical and economic consequences of LVAD in adults with advanced HF in France. **METHODS:** Between April 2008 and November 2011, 55 patients were included in this study in 14 French hospitals and were followed during one year after implantation. The primary medical outcome was the discharge at home and secondary medical outcome was the final situation of patient. This prospective economic analysis adopted the health care payer's perspective and took into account direct medical and non-medical costs. **RESULTS:** This intermediate analysis included 21 patients. LVAD used are HeartMate II (n=12), Jarvik 2000 (n=8) and Ventrassist (n=1). On the 21 patients, 15 were discharged at home spending an average of 265 days (8.7 months) at home. During the follow-up period, 4 patients were transplanted, 6 patients died, and 11 were still on device at home. The mean total cost per implanted patient was €161,843 (±36,533). The device and initial hospitalization are the most important costs and represent respectively 58% and 30% of the total cost. One day spent at home costs in average €59 **CONCLUSIONS:** Continuous-flows LVAD represent a costly strategy in the HF treatment. However, LVAD allow the patient to be discharged at home instead of awaiting heart transplantation at hospital.

PCV68

ECONOMIC COMPARISON OF HEMOSTATIC AGENTS IN CARDIAC SURGERY

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